

## REMARKS

Claims 1 - 15 remain active in this application. Claims 16 - 20 have been canceled without prejudice or disclaimer as being non-elected in response to a requirement for restriction. Amendment of claims 1, 2 and 11 has been requested to improve form and to emphasize novel aspects of the invention already recited in the claims. No new matter has been introduced into the application. The indication of allowability of claims 6 - 9 and 12 - 14 is noted with appreciation.

Claims 1 - 5 and 11 have again been rejected under 35 U.S.C. §103 as being anticipated by Krivokapic et al. and claims 10 and 15 have again been rejected under 35 U.S.C. §103 as being unpatentable over Krivokapic et al. in view of Bae. These grounds of rejection are again respectfully traversed for the reasons of record and the further remarks provided below.

It was previously pointed out in the response filed August 16, 2005, that Krivokapic et al. does not answer the recitations of independent claims 1 and 11 because the discontinuity in layer 30 is not aligned with the gate structure of the invention. While a gate location is defined and a discontinuity formed, the gate structure 42 is applied subsequently and is not "aligned" with any structure but only formed generally centrally between isolation structures 24 by recrystallization of nickel from spacers 38 initially located at the periphery of amorphous silicon layer 40. Moreover, even if the gate of Krivokapic et al. is considered to be aligned with the discontinuity, such a teaching is contrary to that claimed: the discontinuity in accordance with the invention, as claimed, being aligned with the gate.

It was also previously pointed out that the Examiner has improperly applied a product-by-process

analysis to at least claim 2 and thus accorded no weight to the recitations of at least "self-aligned" of claim 2 and, possibly, "aligned" in claims 1 and 11. The relative location of structures is clearly a recitation of a structure and not of a process. In this regard, amendment of claims 1 and 11 has been requested to emphasize the structural aspects of these recitations and to avoid the recitations being construed as process recitations.

However, it is respectfully pointed out that a product-by-process analysis does not negate the significance of differences between a reference and claimed subject matter. Such an analysis merely shifts the burden to Applicant of establishing such differences. In the present case, formation of the discontinuity in a film within a layer of semiconductor material allows control of impurity (e.g. boron) diffusion and limitation of overlap capacitance (see, for example, paragraph 0026) for which no similar control is possible in Krivokapic et al. On the contrary, formation of the gate by recrystallization of nickel subsequent to formation of the discontinuity appears to increase process variability particularly in regard to gate location and dimensions (seemingly emphasized in Krivokapic et al. by the irregular gate shape illustrated) and engender a high degree of criticality in the formation of nickel sidewalls 38 in order to obtain the proper gate silicide volume and external dimensions. Therefore, it is respectfully submitted that the transistor structure, as claimed, is significantly different from that of Krivokapic et al. even under a product-by-process analysis which is again submitted to be improper and particularly untenable in view of the above-requested amendments to claims 1 and 11.

Further, it is respectfully submitted that nothing in Krivokapic et al. answers the recitations of at

least claims 2, 3 or 4 (depending from claim 3). The discontinuity in layer 12, 30 is certainly not "self-aligned" with the gate or a structure similar to or having properties similar to a self-aligned structure, as recited in claim 2. Krivokapic et al. merely describes layer 12, 30 as an "oxide" or " $\text{SiO}_2$ " which is recognized to be an insulator but not a "stressed film" as recited in claims 3 and 4. As previously pointed out, neither of these features can be properly considered to be inherent in Krivokapic et al. and the Examiner has substantially admitted that a stressed film is not, in fact, inherent while, as discussed above, formation of a gate structure by nickel recrystallization is substantially contrary to forming any self-aligned structure.

In regard to the rejection of claims 10 and 15, Bae is cited for teaching the development of a void in an insulator to reduce capacitance across the insulator 33a. However, It is respectfully pointed out that the Examiner has not indicated how Bae mitigates the deficiency of Krivokapic et al. to anticipate the claims or how such a void can be formed in Krivokapic et al. consistent with the remainder of the structure thereof. It is well-established that suggestion of a modification of the structure disclosed in a reference is improper if such a modification would preclude the device, so modified, from functioning in the manner intended (see *In re Gordon*, 221 USPQ 1125 (Fed. Circ., 1984) or where the combined teachings of the references applied do not enable the combination of features. In this regard, production of the structure of Krivokapic et al. appears to rely on the growth of epitaxial silicon from silicon exposed by the aperture in insulating layer 12, 30 which appears to be utterly inconsistent with formation of a void by deposition of insulator on the interior of a "reverse T-shaped" hole. Moreover, it is respectfully submitted that porous

silicon 23b of Bae cannot be properly considered to be a void, particularly, as the Examiner admits, the function thereof is to carry current by which floating body effects are suppressed.

Accordingly, it is respectfully submitted that the Examiner has not made a *prima facie* demonstration of anticipation or obviousness of the subject matter of any claim in the application. On the contrary, the Examiner has admitted that Krivokapic et al. does not answer significant recitations and seeks to justify the asserted grounds of rejection by an improper product-by-process analysis. As pointed out above, even under such an improper analysis, Applicant has met the (shifted) burden of pointing out significant differences which the Examiner asserts to appear similar and the asserted grounds of rejection are respectfully submitted to be untenable. Accordingly, it is respectfully requested that the asserted grounds of rejection be reconsidered and withdrawn.

It is also respectfully submitted that the finality of the present action is premature. As pointed out in the previous response filed August 16, 2005, the Examiner had not made a *prima facie* demonstration of the propriety of the asserted grounds of rejection and has only answered the remarks provided in that response by asserting irrelevancy but not substantively responding thereto while repeating the grounds of rejection, similarly without making a *prima facie* demonstration of the propriety thereof. Accordingly, it is respectfully requested that the finality of the present action be withdrawn and the above-requested amendments entered as a matter of right.

In any event, it is respectfully submitted that the entry of the above-requested amendments is well-justified. The requested amendments merely alter the form but not the intended substance of recitations in

the claims as finally rejected in order to avoid the product-by-process analysis improperly applied by the Examiner and thus cannot raise new issues. Moreover, it is respectfully submitted that entry of the above-requested amendments is well-justified in placing the application in condition for allowance or, in the alternative, by materially reducing and/or simplifying issues for Appeal. Accordingly, entry of the above amendments is respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 09-0458 of International Business Machines Corporation (E. Fishkill).

Respectfully submitted,



Marshall M. Curtis  
Reg. No. 33,138

Whitham, Curtis & Christofferson, P. C.  
11491 Sunset Hills Road, Suite 340  
Reston, Virginia 20190

(703) 787-9400  
Customer Number: 30743